

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 – 33. (Canceled)

34. (Currently Amended) A method of providing load balancing using a load balance switch and a plurality of site switches that each couple at least one host server to a network, the method comprising:

obtaining at one of said site switches mapping information that provides a translation between a private virtual IP address, configured at said site switch and associated with said at least one host server corresponding to said site switch, and a public virtual IP address; and

providing, by said site switch, said public virtual IP address ~~from said site switch~~ to at least one load balancing controller ~~to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch.~~

35. (Currently Amended) The method of claim 34 wherein said providing, by said site switch, said public virtual IP address ~~from said site switch~~ to said at least one load balancing controller includes providing by said site switch said public virtual IP address to a load balancing controller located at said load balance switch.

36. (Currently Amended) The method of claim 35 wherein said providing, by said site switch, said public virtual IP address ~~from said site switch~~ to said at least one load balancing controller further includes providing by said site switch said public virtual IP address to a load balancing controller located at said site switch, to enable said site switch to balance

traffic among plural ones of said at least one host server corresponding to said site switch and associated with said private virtual IP address.

37. (Currently Amended) The method of claim 34 wherein public virtual IP addresses received by said load balancing controller as part of reply to a query for network addresses and that do not have indication in ~~said an~~ address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balancing controller and are excluded from having applied thereto any metric of a load balancing algorithm that is usable with virtual IP addresses.

38. (Previously Presented) The method of claim 34 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address, said at least one metric including an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

39. (Previously Presented) A method of providing load balancing using a load balance switch and a plurality of site switches that each couple at least one host server to a network, the method comprising:

receiving, at said load balance switch, a public virtual IP address that is mapped to a private virtual IP address configured at one of said site switches, said private virtual IP address being associated with said at least one host server corresponding to said site switch;

updating an address record of said load balance switch to indicate said received public virtual IP address as being associated with said site switch; and

applying, at said load balance switch, at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address.

40. (Previously Presented) The method of claim 39 wherein public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto said at least one metric of said load balancing algorithm that is usable with virtual IP addresses.

41. (Currently Amended) The method of claim 39 wherein said receiving said public virtual IP address, at said load balance switch, includes receiving said public virtual IP address at said load balance switch from said site switch, which is remote from said load balance switch, for entry into said address record.

42. (Previously Presented) The method of claim 39 wherein said at least one metric includes an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

43. (Currently Amended) An article of manufacture, comprising:  
a storage medium at a site switch and having instructions stored thereon that are executable by said site switch to enable load balancing ~~using a load balance switch and plural ones of said site switch that each couple at least one host server to a network~~, by:  
obtaining at said site switch mapping information that provides a translation between a private virtual IP address and a public virtual IP address, said private virtual IP

address being configured at said site switch and being associated with ~~said~~ at least one host server corresponding to said site switch; and

providing, by said site switch, said public virtual IP address ~~from said site switch~~ to at least one load balancing controller ~~to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch.~~

44. (Currently Amended) The article of manufacture of claim 43 wherein the instructions to provide, by said site switch, said public virtual IP address ~~from said site switch~~ to said at least one load balancing controller includes instructions to provide by said site switch said public virtual IP address to a load balancing controller located at said load balance switch.

45. (Currently Amended) The article of manufacture of claim ~~44~~43 wherein the instructions to provide, by said site switch, said public virtual IP address ~~from said site switch~~ to said at least one load balancing controller ~~further~~ includes instructions to provide by said site switch said public virtual IP address to a load balancing controller located at said site switch, to enable said site switch to balance traffic among plural ones of said at least one host server corresponding to said site switch and associated with said private virtual IP address.

46. (Previously Presented) The article of manufacture of claim 43 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address, said at least one metric including an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

47. (Currently Amended) An article of manufacture, comprising:

a storage medium at a load balance switch and having instructions stored thereon that are executable by said load balance switch to enable load balancing using said load balance switch and a plurality of site switches that each couple at least one host server to a network, by:

receiving, at said load balance switch, a public virtual IP address that is mapped to a private virtual IP address configured at one of said a plurality of site switches, said private virtual IP address being associated with said at least one host server corresponding to said site switch;

updating an address record of said load balance switch to indicate said received public virtual IP address as being associated with said site switch; and

applying, at said load balance switch, at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address.

48. (Previously Presented) The article of manufacture of claim 47 wherein public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto any metric of said load balancing algorithm that is usable with virtual IP addresses.

49. (Previously Presented) The article of manufacture of claim 47 wherein the instructions to receive said public virtual IP address, at said load balance switch, includes instructions to receive said public virtual IP address at said load balance switch from said site switch, which is remote from said load balance switch, for entry into said address record.

50. (Previously Presented) The article of manufacture of claim 47 wherein said at least one metric includes an active bindings metric that prefers a virtual IP address,

configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

51. (Currently Amended) A network device, comprising:

a site switch configurable with a private virtual IP address associated with at least one host server corresponding to said site switch; and

a component in said site switch to obtain ~~mapping information that provides a translation between a public virtual IP address translated from said private virtual IP address and a public virtual IP address,~~

wherein said site switch is adapted to provide said obtained public virtual IP address to at least one load balancing controller ~~to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch.~~

52. (Previously Presented) The network device of claim 51 wherein said at least one load balancing controller includes a load balancing controller located at a load balance switch remote from said site switch.

53. (Currently Amended) The network device of claim ~~52~~51 wherein said at least one load balancing controller ~~further~~ includes a load balancing controller located at said site switch and adapted to balance traffic among plural ones of said at least one host server corresponding to said site switch and associated with said private virtual IP address.

54. (Currently Amended) The network device of claim 51 wherein public virtual IP addresses received by said load balancing controller as part of reply to a query for network addresses and that do not have indication in ~~said an~~ address record as being associated

with a corresponding one of a plurality of said site switch, are treated as real IP addresses by said load balancing controller and are excluded from having applied thereto any metric of a load balancing algorithm that is usable with virtual IP addresses.

55. (Previously Presented) The network device of claim 51 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address, said at least one metric including an active bindings metric that prefers a virtual IP address, configured at respective plural ones of said site switch, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preference of another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

56. (Previously Presented) A network device, comprising:  
a load balance switch adapted to receive a public virtual IP address that is mapped to a private virtual IP address configured at a site switch, said private virtual IP address being associated with at least one host server corresponding to said site switch; and  
an address record of said load balance switch to indicate said received public virtual IP address as being associated with said site switch,  
wherein said load balance switch is further adapted to apply at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address.

57. (Previously Presented) The network device of claim 56 wherein other public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto said at least one metric of said load balancing algorithm that is usable with virtual IP addresses, and

wherein said public virtual IP address, which is indicated in said address record as being associated with said site switch, has said at least one metric applied thereto by said load balance switch, if said public virtual IP address is included in said reply to said query.

58. (Previously Presented) The network device of claim 56 wherein said at least one metric includes an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preference of another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

59. (Previously Presented) The network device of claim 56 wherein said public virtual IP address received by said load balance switch is received from said site switch, which is remote from said load balance switch.

60. (Previously Presented) The method of claim 34 wherein said obtaining at said site switch said mapping information includes obtaining at said site switch said mapping information from a mapping device that includes a network address translation device or a firewall device.

61. (Previously Presented) The article of manufacture of claim 43 wherein said instructions to obtain at said site switch said mapping information includes instructions to obtain at said site switch said mapping information from a mapping device that includes a network address translation device or a firewall device.



62. (Currently Amended) The network device of claim ~~34~~51 wherein said component in said site switch is adapted to obtain said ~~mapping information~~ public virtual IP address from a mapping device that includes a network address translation device or a firewall device.